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Catalog of Federal Metrology and Calibration Capabilities

546

NATIONAL BUREAU OF STANDARDS

The National Bureau of Standards[1] was established by an act of Congress March 3, 1901. The Bureau's overall goal is to strengthen and advance the Nation's science and technology and facilitate their effective application for public benefit. To this end, the Bureau conducts research and provides: (1) a basis for the Nation's physical measurement system, (2) scientific and technological services for industry and government, (3) a technical basis for equity in trade, and (4) technical services to promote public safety. The Bureau's technical work is performed by the National Measurement Laboratory, the National Engineering Laboratory, and the Institute for Computer Sciences and Technology.

THE NATIONAL MEASUREMENT LABORATORY provides the national system of physical and chemical and materials measurement; coordinates the system with measurement systems of other nations and furnishes essential services leading to accurate and uniform physical and chemical measurement throughout the Nation's scientific community, industry, and commerce; conducts materials research leading to improved methods of measurement, standards, and data on the properties of materials needed by industry, commerce, educational institutions, and Government; provides advisory and research services to other Government Agencies; develops, produces, and distributes Standard Reference Materials; and provides calibration services. The Laboratory consists of the following centers:

Absolute Physical Quantities[2] — Radiation Research — Thermodynamics and Molecular Science — Analytical Chemistry — Materials Science.

THE NATIONAL ENGINEERING LABORATORY provides technology and technical services to users in the public and private sectors to address national needs and to solve national problems in the public interest; conducts research in engineering and applied science in support of objectives in these efforts; builds and maintains competence in the necessary disciplines required to carry out this research and technical service; develops engineering data and measurement capabilities; provides engineering measurement traceability services; develops test methods and proposes engineering standards and code changes; develops and proposes new engineering practices; and develops and improves mechanisms to transfer results of its research to the utlimate user. The Laboratory consists of the following centers:

Applied Mathematics — Electronics and Electrical Engineering[2] — Mechanical Engineering and Process Technology[2] — Building Technology — Fire Research — Consumer Product Technology — Field Methods.

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Systems and Software — Computer Systems Engineering — Information Technology.

[1]Headquarters and Laboratories at Gaithersburg, Maryland, unless otherwise noted; mailing address Washington,D.C. 20234.
[2]Some divisions within the center are located at Boulder, Colorado, 80303.

The National Bureau of Standards was reorganized, effective April 9, 1978.

National Bureau of Standards
JUN 19 1979

Catalog of Federal Metrology and Calibration Capabilities

Kathryn O. Leedy

Office of Measurement Services
National Measurement Laboratory
National Bureau of Standards
Washington, D.C. 20234

U.S. DEPARTMENT OF COMMERCE, Juanita M. Kreps, Secretary
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NATIONAL BUREAU OF STANDARDS, Ernest Ambler, Director

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CATALOG OF

FEDERAL METROLOGY AND CALIBRATION CAPABILITIES

Kathryn O. Leedy
PMTE Project
Office of Measurement Services
National Bureau of Standards
Washington, DC 20234

ABSTRACT

This publication lists Federal laboratories involved in metrology and calibration. Included is the name of a person at each laboratory to contact for more information as well as the laboratory telephone number and address. The capabilities of each laboratory are indicated in a tabular listing by agency. To provide geographical distribution, the laboratories are listed by States. In addition, the laboratories are shown on a map by coded number. Other references are described.

Key words: Calibration; Federal Government; laboratory; measurement; metrology; precision; test equipment.

I. INTRODUCTION

This is a directory of Federal measurement standards laboratories. For each laboratory listed, it includes the laboratory name and location, a point of contact with telephone number, and the laboratory capabilities. A geographical distribution is also given.

This information is assembled and maintained by the Office of Measurement Services at the National Bureau of Standards in conjunction with its program on the Federal use of precision measuring and test equipment (PMTE). The overall objective of this program is to coordinate improvements in the management and use of such equipment. In addition to compiling this catalog, NBS also hosts meetings to promote cooperation and information exchange among Federal agencies, holds workshops to discuss particular metrology problems, and issues handbooks to encourage uniform procedures.

This catalog will eventually include all Federal metrology laboratories concerned with calibrations on the primary or secondary standards level. The initial edition, however, contains only information assembled at the time of publication. Subsequent updated editions will be issued regularly. To receive copies, return the attached form or contact the Office of Measurement Services and ask to be on the "Capabilities Catalog Mailing List."

National Bureau of Standards
Office of Measurement Services
Physics B362
Washington, DC 20234
(301) 921-2805

This catalog is a compilation of information received from the agencies and laboratories listed. It should not be construed as an endorsement or rating of the individual laboratories by the National Bureau of Standards.

II. HOW TO USE THIS CATALOG

To locate a particular laboratory, consult the directory in Section III. Here the laboratories are listed alphabetically within the sections for each agency. A code number is assigned each laboratory for use in the geographical index (see Section V).

To obtain policy information from any of the agencies listed, contact the person listed for each agency in Section III.

To identify a laboratory with a particular capability, review the charts in Section IV. Here the laboratories are listed by name within the sections for each agency. The categories of capability are listed across the top of the chart (an explanation of the categories is given in Section VI). For each capability of a laboratory, there is a mark in the corresponding category column. Note also that there is a code after the laboratory that indicates if it is a member of the National Conference of Standards Laboratories (NCSL) and if the lab publishes its own capability catalog.

Capability catalogs of individual Federal laboratories may be obtained directly from the laboratories or, in some cases, from the NBS Office of Measurement Services. NBS can also provide NCSL membership kits (for more information on NCSL, see Section VII).

To locate laboratories in a given geographical area, consult Section V. It lists the laboratories by state and includes a map of the United States with the location of each laboratory noted by its number code.

Section VI describes the capability categories used in Section IV. Other sources of information are given in Section VII. Included are descriptions of the National Conference of Standards Laboratories and the Government-Industry Data Exchange Program (GIDEP) system. Readers are asked to suggest improvements for the next edition of the "Catalog of Federal Metrology and Calibration Capabilities." Please fill out and return the attached information form.

III. LABORATORY DIRECTORY

DEPARTMENT OF DEFENSE

Policy information:

Herbert L. Leonard, Jr.
Chairman, JTCG-METCAL
Wright-Patterson AFB, OH 45433

(513) 257-6163

Alternative Policy Contacts:

Air Force
Herbert L. Leonard, Jr.
Chairman, JTCG-METCAL
Wright-Patterson AFB, OH 45433

(513) 257-6163

Army
Jack Rivers
Directorate for Quality Assurance
DRCQA-PC
5001 Eisenhower Avenue
Alexandria, VA 22333

(202) 274-9868

Navy
Joe Siedlecki
MAT04T-2
HQ, Naval Material Command
Washington, DC 20360

(202) 692-2035

AIR FORCE

Laboratories:

A1 Air Force Measurement Standards Laboratories
AGMC/ML
Newark AFS
Newark, OH 43055

Lt. Col. C. Chrisman
(614) 522-7495
AV: 580-7495

Type IIA Laboratories:

A2 Bitburg AB GE
36 TFW/MAAML
APO, NY 09132

J. Sappe
06561-6-7765/7841
AV: 455-7765/7841

A3 Clark AB Phil
3 CRS/MACMP
APO SF 96274

T. Narasaki
AV: 822-33694

A4 Elmendorf AFB
343 CRS/MACP
AK 99506

S. Barankiewicz
(907) 752-3314
AV: (317) 752-3483

A5 Hill AFB
OO-ALC/MACL
UT 84406

B. Peterson
(801) 777-2307
AV: 458-2307

A6 Kelly AFB
SA-ALC/MATL
TX 78241

G. Granato
(512) 925-8625
AV: 945-8625

A7 McClellan AFB
SM-ALC/MAIL
CA 95652

M. Bertolino
(916) 643-3121
AV: 633-3121

A8 Newark AFS
AGMC/MANL
OH 43055

G. Lovejoy
(614) 522-7283
AV: 580-7346

A9 Robins AFB
WR-ALC/MANL
GA 31098

R. Grant
(912) 926-3082
AV: 468-3082 x2524

A10 Tinker AFB
OC-ALC/MATL
OK 73145

C. Stueve
(405) 734-2959
AV: 735-2959

Type IIB-1 Laboratories:

A11 Chanute AFB
3345 CMS/MAA/PMEL
IL 61868

W. Allen
(217) 495-2446
AV: 862-2446 x2167

A12 Ellsworth AFB
28 AMS/MAAP
SD 57706

N. Sperle
(605) 399-7966
AV: 747-7966 x7549

A13 F E Warren AFB
90 FMMS/MBAL
WY 82001

W. Spence
(307) 775-2278
AV: 481-2364 x2278

A14 Malmstrom AFB
341 FMMS/MBAL
MT 59402

J. Hawkins, Jr.
(406) 731-3703/3097
AV: 632-3703

A15 Minot AFB
5 AMS/MAAP
ND 58705

R. Hoffman
(701) 727-4761 x3225
AV: 344-3225

A16 Whiteman AFB
351 FMMS/MBAL
MO 65305

P. Davis
(816) 687-1110 x3415/3595
AV: 975-3415 x3595

Type IIB-2 Laboratories:

A17 Albrook AFS CZ
24 CAMS/MACL
APO NY 09825

H. Vela
AV: 86-4138

A18 Altus AFB
443 AMS/MAAP
OK 73521

L. Crovo
(405) 481-6685
AV: 866-6685

A19 Andersen AFB Guam
43 AMS/MAAP
APO SF 96334

J. Brown
AV: (315) 366-5260/5269

A20 Andrews AFB
OL-A, 89 FMS/MAAP
MD 20331

J. Fuentes
(202) 767-5295/4336
AV: 297-5295/4336

A21 Aviano AB Italy
40 CAMS/MAAML
APO NY 09293

J. Nevious
0434-651141
AV: 632-5631/5563

A22 Barksdale AFB
2 AMS/MAAP
LA 71110

H. Strickland
(318) 456-3842
AV: 781-3842

A23 Beale AFB
9 AMS/MAAP
CA 95903

R. Dant
(916) 634-2293/2336
AV: 368-2293/2336

A24 Bergstrom AFB
67 AMS/MAAL
TX 78743

G. Elam
(512) 385-4100 x2693/2694
AV: 685-2693/2694

A25 Blytheville AFB
97 AMS/MAAP
AR 72315

R. Babb
(501) 762-7487/7558
AV: 637-7478 x7558

A26 Camp New Amsterdam AB NE
32 TFS/MAAML
APO NY 09292

R. O'Boyle, Jr.
08384-1944
AV: x415/429

A27 Cannon AFB
27 CRS/MACE
NM 88101

A. Koshkorian
(505) 784-3311 x2672/2673
AV: 681-2676/2673

A28 Carswell AFB
7 AMS/MAAP
TX 76127

D. Fallon
(817) 735-7574/7787
AV: 739-7574/7787

A29 Castle AFB
93 AMS/MAAP
CA 95342

R. Nielsen
(209) 726-2811 x2302
AV: 347-2811 x2302

A30 Charleston AFB
437 AMS/MAAP
SC 29404

W. Aten
(803) 554-3281 x3683
AV: 583-3281 x3683

A31 Ching Chuan Kang Taiwan
6217 AB SQ/MAP
APO SF 96319

J. Ingram
AV: 723-0-3014/2822

A32 Columbus AFB
14 FMS/MAAP
MS 39701

J. Williamson
(601) 434-7551
AV: 742-7551 x7883

A33 Davis Monthan AFB
355 CRS/MACL
AZ 85707

F. Buser
(602) 748-4250 x5553
AV: 361-4250 x5553

A34 Dover AFB
436 MAW/MAAP
DE 19901

E. Bresnyan
(302) 678-7011 x6766/7293
AV: 455-6766/7293

A35 Duluth Intl Aprt
4787 MATS/LGMEP
MN 55814

R. Brown
(218) 727-8211 x2580/2589
AV: 825-2580/2589

A36 Dyess AFB
96 AMS/MAAP
TX 79607

L. Snellings
(915) 696-4148 x2534
AV: 461-4148 x2534

A37 Eielson AFB
5010 CAMS/MACP
AK 99702

D. Linnen
(907) 377-4292
AV: 317-372-3115

A38 England AFB
23 CRS/MACL
LA 71301

B. Schultz
(318) 448-5164/5165
AV: 683-5164/5165

A39 Fairchild AFB
92 AMS/MAAP
WA 99011

F. Browne
(509) 247-7212 x5270/2332
AV: 352-5270/2332

A40 Feltwell England
48 AMS/MAAML
APO NY 09179

M. Glisson
AV: 226-3867/3673

A41 Forbes AFB
190 DSEG/PMEL
KS 66620

R. Eckelberry
(316) 862-1234 x4067
AV: 720-4067

A42 George AFB
35 AMS/MAAL
CA 92392

J. Hopkins
(714) 269-3171
AV: 353-3171/3476

A43 Grand Forks AFB
319 AMS/MAAP
ND 58205

F. Bandy
(701) 594-6641/6642
AV: 362-6641/6642

A44 Grissom AFB
305 AMS/MAAP
IN 46971

G. Dalum
(317) 689-2362/2363
AV: 928-2362/2363

A45 Hahn AB GE
50 CRS/MACML
APO NY 09109

L. Mullinax
06543-5-7122/7656
AV: 453-7112/7656

A46 Hickam AFB
15 AMS/LGMAMP
HI 96853

M. Iseri
(808) 449-1318
AV: 430-0111

A47 Homestead AFB
31 CRS/MACL
FL 33030

R. Yager
(305) 257-7845
AV: 791-7845

A48 Incirlik CDI Turkey
TUSLOG DET 192/MAAML
APO NY 09289

C. Houston
AV: 676-3120/6352

A49 K I Sawyer AFB
410 AMS/MAAP
MI 49842

R. Koch
(906) 346-2117
AV: 472-2117/2389

A50 Kadena AB Okinawa
18 CRS/MACMP
APO NY 96239

W. Phillips
AV: 630-1110 44215/42556

A51 Karamursel CDI Turkey
TUSLOG DET 94/LGMP
APO NY 09324

W. Fedorwicz
AV: 675-3353/3352

A52 Keesler AFB
3380 AMS/MAAP
MS 39534

I. Arguelles
(601) 377-3695
AV: 868-3695

A53 Keflavik Aprt Iceland
57 FIS/LGMCEP
APO NY 09571

G. Coon
AV: 228-0217-7724/5281

A54 Kunsan AB Korea
8 CRS/MACMP
APO SF 96264

O. Eyer
AV: 274-4101/4591

A55 Lajes Field Azores
1605 CAMS/LGMA
APO NY 09406

W. King
AV: 895-3490 x3273

A56 Langley AFB
1 CRS/MACL
VA 23665

W. Taylor
(804) 764-3758/4696
AV: 432-3758/4696

A57 Laughlin AFB
47 FMS/MAAP
TX 78840

S. Phillips
(512) 298-5714
AV: 735-5714

A58 Little Rock AFB
314 AMS/MAAP
AR 72076

W. Doyle
(501) 988-6766/3492
AV: 731-6766/3492

A59 Loring AFB
42 AMS/MAAP
ME 04750

D. Meyers
(207) 999-6287/7228
AV: 920-6287/7228

A60 Lowry AFB
3415 CMS/MAABL
CO 80230

R. Bado
(303) 388-3966
AV: 926-3966

A61 Luke AFB
58 CRS/MACL
AZ 85309

D. Dittus
(602) 935-7411 x2177/2108
AV: 853-2177/2108

A62 MacDill AFB
56 CRS/MACL
FL 33608

D. Alexander
(813) 830-4254/3706
AV: 968-4254/3706

A63 Mather AFB
323 AMS/MAAP
CA 95655

J. Colosimo
(916) 364-2270
AV: 828-2270

A64 Maxwell AFB
3800 ABW/MAAP
AL 36112

R. Barbaree
(205) 293-7445/6554
AV: 875-7445/6554

A65 McChord AFB
62 AMS/MAAP
WA 98438

G. Baxter
(206) 984-5492/2396
AV: 976-5492/2396

A66 McConnell AFB
384 AMS/MAAP
KS 67221

O. Moos II
(316) 681-6405/5151
AV: 962-6405/5151

A67 McGuire AFB
438 AMS/MAAP
NJ 08641

A. Burke
(609) 724-2939/3441
AV: 440-2939/3441

A68 Misawa AB Japan
6920 ABG/LGM/PMEL
APO SF 96519

L. Dortch
248-1101
AV: 226-3389/5229

A69 Moody AFB
347 CRS/MACL
GA 31601

J. Stewart
(912) 333-4211 x3696
AV: 460-3696/3514

A70 Mt. Home AFB
366 CRS/MACE
ID 83648

W. Mallace
(208) 828-6324
AV: 857-6324/6414

A71 Muniz ANGB PR
156 TFG/LGM
PR 00914

J. Reyes
(809) 791-4115
AV: 860-9142

A72 Myrtle Beach AFB
354 CRS/MACL
SC 29577

J. Wright
(803) 238-7950/7244
AV: 748-7950/7244

A73 Nellis AFB
57 CRS/MACL
NV 89191

M. Miller
(702) 643-1800 x4027/4963
AV: 682-4027/4963

A74 Norton AFB
63 AMS/MAAP
CA 92409

P. Assini
(714) 382-4320/3161
AV: 876-4320/3161

A75 Offutt AFB
55 AMS/MAAP
NB 68113

C. Green
(402) 292-6041/5261
AV: 271-6041/5261

A76 Osan AB Korea
51 CRS/MACMP
APO SF 96570

J. Hopkins
AV: 284-5105/4246

A77 Otis AFB
102 CAMRON SQ/LGM-P
MA 02542

G. Stimus
(617) 968-5125
AV: 557-5125

A78 Pease AFB
509 AMS/MAAP
NH 03801

C. Lutz
(603) 436-0100 x1723/2547
AV: 852-1723/2547

A79 Peterson AFB
46 CAMS/LGMFE
CO 80914

K. Davis
(303) 591-4496/4420
AV: 692-4496/4420

A80 Plattsburgh AFB
380 AMS/MAAP
NY 12903

R. Reed
(518) 565-5270
AV: 689-5273/5274

A81 Pope AFB
317 TAW/MAAP
NC 28308

D. Gordon
(919) 394-4109
AV: 486-4109 x2475

A82 Ramstein AB Germany
86 AMS/MAAML
APO NY 09012

R. Leach
AV: 494-2491 x5525

A83 Randolph AFB
12 FMS/MAA
TX 78148

R. Rangel
(512) 652-3961
AV: 487-3961

A84 Reese AFB
64 FMS/MAAP/19
TX 79489

C. Huenergardt
(806) 885-3480 x2158
AV: 838-3480 x2158

A85 Rickenbacker AFB
301 AMS/MAAP
OH 43217

J. Wright
(614) 492-4324
AV: 950-4324

A86 San Vito Dei Normanni
6719 AB SQ/LGM/PMEL
IT
APO NY 09240

D. Niemann
AV: 622-1110 x3308

A87 Scott AFB
375 CAMS/MAAP
IL 62225

H. Crooks
(618) 256-3721
AV: 638-3721

A88 Selfridge ANGB
Det 1 HQ MI ANG/MABP
MI 48045

G. Strassburg
(313) 466-5817
AV: 273-5817 x4302

A89 Seymour Johnson AFB
4 CRS/MACL
NC 27531

A. Griffin
(919) 736-0000 x5762/5493
AV: 488-5762/5493

A90 Shaw AFB
363 CRS/MACL
SC 29152

H. Caudle
(803) 668-8110 x2656/2604
AV: 965-2656 x2604

A91 Shemya AFB AK
5073 ABG/PMEL
APO Seattle 98736

J. Maier
(907) 572-3000 x7283
AV: 572-7283

A92 Sheppard AFB
3750 CMS/MAAP/234
TX 76311

H. Miller
(817) 851-2693
AV: 736-2693

A93 Tempelhof Cent Aprt GER
7350 AB GP/MAAML
APO NY 09611

G. Dalldorf
AV: 411-5367 x5086

A94 Thule AB Greenland
BMEWS, FSI/FSTP
APO NY 09023

D. Roberts
AV: 9-308

A95 Torrejon AB Spain
401 TFW/MAAML
APO NY 09283

H. Burrell
AV: 723-6844 x7075

A96 Travis AFB
60 AMS/MAAP
CA 94535

L. Johns
(707) 438-3244 x3245
AV: 837-3244 x3245

A97 Tyndall AFB
4756 AMS/MAAP
FL 32403

P. Patterson
(904) 283-2764
AV: 970-2764 x2484

A98 Upper Heyford England
20 AMS/MAAML
APO NY 09194

R. Madden
AV: 263-4949 x4241

A99 USAFA CO
USAFA/DFIT-ML
CO 80840

F. Perry
(303) 472-4047
AV: 259-4047 x4137

A100 Vance AFB
71 FTW/NW-DAM/PMEL
OK 73701

L. Watson
(405) 237-2121 x7250
AV: 962-7250

A101 Williams AFB
82 FTW/MAAP
AZ 85224

E. Lane
(602) 988-2611 x6770
AV: 474-6770

A102 Wurtsmith AFB
379 AMS/MAAP
MI 48753

T. Brown
(517) 739-6282
AV: 623-6282

A103 Yokota AB Japan
610 MASS/LGMAP
APO SF 96328

R. Renner
AV: 255-7156

Type IIC laboratories:

A104 Edwards AFB
6515 AMS/LGMAP
CA 93523

R. Hesselgrave
(805) 277-4291 x3751
AV: 350-4291 x3751

A105 Eglin AFB
3242 AMS/LGMEP
FL 32542

D. Burch
(904) 882-3546 x5631
AV: 872-3546 x5631

A106 Griffis AFB
416 AMS/MAAP
NY 13441

A. Campbell
(315) 330-4807
AV: 587-4807 x4948

A107 Hanscom AFB
3245 ABG/LGK
MA 01731

W. Frost
(617) 861-2661/2662
AV: 478-2661/2662

A108 Holloman AFB
49 CRS/MACL
NM 88330

R. Osborne
(505) 479-6511 x3806
AV: 867-3806

A109 Kirtland AFB
1550 FMS/MAAP
NM 87117

L. Baggette
(505) 264-0011 x4-9939
AV: 964-9939

A110 Patrick AFB
Det 1, SAMTEC/PMEL/P
FL 32925

J. George
(305) 853-9412
AV: 467-9412

A111 Patrick AFB
Det 1, SAMTEC/PMEL/E
FL 32925

R. Schnepf
(305) 494-2504
AV: 854-2504

A112 Vandenberg AFB
SAMTEC/Bldg 1737/PMEL
CA 93437

W. Schone
(805) 866-6595
AV: 276-6595

A113 Wright-Patterson AFB
4950 Test Wing/MADE
OH 45433

B. Lehmenkuler
(513) 257-7707
AV: 787-7707

ARMY

Type I Laboratory:

B1 Army Standards Laboratory
Commander
U.S. Army Missile Materiel Readiness Command
U.S. Army Metrology and Calibration Center
ATTN: DRSMI-MS, Bldg. 5435
Redstone Arsenal, AL 35809

J. C. McKinney, Jr.
(205) 876-7718

Laboratories:

B2 Area Calibration Laboratory, Korea
Commander
Materiel Support Center (Waegan)
ATTN: EANC-MSC-C
APO San Francisco, CA 96460

M. Dayton
TAEGU MIL 265-8531/8518

B3 Army Area Calibration Laboratory
Commander
Letterkenny Army Depot
ATTN: SDSLE-QC
Chambersburg, PA 17201

Donald L. Flory
(717) 263-6012
AV: 242-6012

B4 Area Calibration Laboratory
Commander
Tobyhanna Army Depot
ATTN: SDSTO-QT
Tobyhanna, PA 18466

Joseph A. Reina
(717) 894-8301 x7594
AV: 247-9594

B5 CRSC, Augsburg
Commander
ATTN: AETSSC-SS-CRSCA
APO NY 09178

J. Vines
FLAK MIL 2582-4690/4699

B6 CRSC, Pirmasens
Commander
ATTN: AERKD-R
APO NY 09138

J. Santana
Pirmasens MIL 2211-8312/7264

B7 CRSC, Schwanheim
Commander
ATTN: AETVSC-ST-CU
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D. Tolton
Frankfurt MIL 2311-8255/8237

B8 Lexington-Blue Grass Depot Activity
Lexington, KY 40511

Douglas L. Hanna
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NAVY

Type I Laboratories:

C1 Western Standards Laboratory
Code 700
Naval Air Rework Facility, North Island
San Diego, CA 92135

O. J. Belzer
(714) 437-6991
AV: 951-6991

C2 Eastern Standards Laboratory
ESA-53, Bldg. 219-2
Naval Weapon Engineering Support Activity
Washington Navy Yard
Washington, DC 20374

D. Spangenburg
(202) 433-3078
AV: 288-2346

Type II Laboratories:

C3 Commanding Officer
Naval Air Rework Facility
US Naval Air Station
Navy Standards Lab, Type II, 660
Alameda, CA 94501

C. Peeler/L. Noe
(415) 869-2461
AV: 686-2461

C4 Commanding Officer
Naval Air Rework Facility
Technical Services Section 35220
Bldg. V-88
Norfolk, VA 23511

Wiggins
AV: 690-4288

C5 Commanding Officer Naval Air
Rework Facility, NAS
Type II Standards Lab
Attn: Code 370
Bldg. 3220, Rm. 111
Pensacola, FL 32508

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AV: 922-2277

C6 Naval Plant Representative
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Navy Stds Lab - Type II Code GLSE
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Pomona, CA 91766

T. Moran
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AV: 360-2811

C7 Commanding Officer
US Navy Underwater Systems Center
Attn: Navy Standards Lab Type II
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L. Gabriel
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AV: 948-3239/3658

C8 Commander
Pearl Harbor Naval Shipyard
Navy Standards Lab, Type II (Code 916)
Box 400
Pearl Harbor, HI 96860

W. Gould
AV: 430-0111 x471-3208

Navy Calibration Laboratories:

C9 Commander
Charleston Naval Shipyard
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FAC Code 134.3, Bldg. 177
Charleston, SC 29408

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C10 Commander
Long Beach Naval Shipyard
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Long Beach, CA 90802

D. McBride
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C11 Commander
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D. Jones
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C12 Commanding Officer
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P. O. Box 490
FPO Seattle 98772

J. R. Chiders
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C13 Commanding Officer
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(IWAKUNI, JPN)
Attn: NAV CALAB Annex
FPO Seattle, 98764

A. Romanello
AV: 236-4284

C14 Commanding Officer
US Marine Corps Air Station
Attn: US Navy CALAB Annex
Kaneohe Bay, HI 96863

D. P. Marshall
AV: 257-2148

C15 Commanding General
MCLSB Atlantic
Attn: Code 360
Albany, GA 31704

J. Adair
(912) 439-5367
AV: 460-5367

C16 Commanding General
MCLSB Pacific
Attn: Code B360 Calibration Br.
Barstow, CA 92311

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AV: 282-2220

C17 Commanding Officer
Naval Air Engineering Center
Test Dept. Code 947
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Marine Corps Air Station
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San Diego, CA 92135

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AV: 951-5011

C22 Commanding Officer
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(GUAM)
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J. D. Webb
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C23 Commanding Officer
US Naval Air Station (BERMUDA)
Attn: AMD CALAB
FPO New York 09560

AV: 938-3460

C24 Commanding Officer
Naval Air Station (CUBI PT. PHIL)
Attn: Navy CALAB
P. O. Box 16
FPO San Francisco 96654

H. Livingston
AV: 5-3702

C25 Commanding Officer
US Naval Air Station, Whidbey Island
Attn: Navy CALAB
Oak Harbor, WA 98278

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AV: 820-2141

C26 Commanding Officer
Naval Air Test Center
Attn: TSD Division
Naval Air Station
Patuxent River, MD 20670

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AV: 356-4231

C27 Commanding Officer
US Naval Avionics Facility
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21st & Arlington Ave.
Indianapolis, IN 46218

T. Pearson
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C28 Commanding Officer
NAVELEXSYSENGCEN Charleston
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North Charleston, SC 25406

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C29 Commanding Officer
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C30 Commanding Officer
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Indian Head, MD 20640

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C31 Commanding Officer
US Naval Ordnance Station
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Louisville, KY 40214

B. Rhodes
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AV: 989-5368

C32 Commanding Officer
Naval Ship Repair Facility (GUAM)
Attn: Navy CAL FAC, 136
FPO San Francisco, 96630

A. Cabrera
AV: 322-1110

C33 Commanding Officer
Naval Ship Repair Facility
(SUBIC BAY, PHIL)
Attn: Navy CAL FAC, Code 950C
FPO San Francisco 96651

F. Collins
AV: 844-1101

C34 Commanding Officer
US Naval Ship Repair Facility
(YOKOSUKA, JPN)
Attn: Navy CAL FAC Code 370
Box 8
FPO Seattle 98762

Hickling
AV: 234-3140

C35 Commanding Officer
US Naval Station (ADAK, AL)
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P. O. Box 49
FPO Seattle 98791

B. P. Wagner
AV: 579-3480

C36 Commanding Officer
US Naval Station (ROTA, SPAIN)
Attn: Navy Calibration Lab
Box 15
FPO New York 09540

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C37 Officer in Charge
Naval Surface Weapons Center
White Oak Laboratory
Attn: Calibration Lab
Silver Springs, MD 20910

B. Ludwick
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C38 Commanding Officer
US Naval Weapons Center
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C39 Commanding Officer
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Concord, CA 94520

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Colts Neck, NJ 07722

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C41 Commanding Officer
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NAVCALAB Code 404, Building 39
Crane, IN 47522

L. McPike
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C42 Commanding Officer
Naval Weapons Station
Attn: NAVCALAB Code 31
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(213) 594-7394
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C43 Commanding Officer
US Naval Weapons Station
Attn: NAVCALAB/QEL
Yorktown, VA 23491

J. Blandford
(703) 887-4583
AV: 953-4583

C44 Commanding Officer
US Navy Torpedo Station
Attn: Metrology Branch A/314
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Keyport, WA 98345

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C45 Commander
Norfolk Naval Shipyard
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Code 134.3
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G. Waters
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C46 Commanding Officer
Pacific Missile Test Center
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C47 Commander
Philadelphia Naval Shipyard
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H. Lawyer
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C48 Commander
Portsmouth Naval Shipyard
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DEPARTMENT OF ENERGY

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D1 The Bendix Corporation
Kansas City Division
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Kansas City, Missouri 64141

J. F. Hadley
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D2 General Electric Company
Neutron Devices Department
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St. Petersburg, FL 33733

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D3 Los Alamos Scientific Laboratory
Metrology Laboratory
Mail Stop 472
Los Alamos, NM 87545

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FTS: 843-7216

D4 Mason and Hanger-Silas Mason Co.
P. O. Box 30020
Amarillo, TX 79177

R. A. Wilcox
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D5 Monsanto Research Corporation
Mound Facility
P. O. Box 32
Miamisburg, OH 45342

H. E. Bent
(513) 866-7444, x7403
FTS: 774-7403

D6 Rockwell International
Rocky Flats Plant
P. O. Box 464
Golden, CO 80401

R. A. Hilbig
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D7 Sandia Laboratories
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Organization 8413-1
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Livermore, CA 94550

J. L. Wilson
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D8 Sandia Laboratories
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D9 Bartlesville Energy Technology Center
P. O. Box 1398
Bartlesville, OK 74003

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Robert Bauer

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D10 Ames Laboratory
Iowa State University
Ames, IA 50011

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D11 Argonne National Laboratory
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D12 Brookhaven National Laboratory
Upton, NY 11973

Gerry C. Kinne
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D13 Fermi National Accelerator Laboratory
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Batavia, IL 60510

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D14 New Brunswick Laboratory
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D15 Grand Forks Energy Technology Center
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Grand Forks, ND 58201

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Laboratory:

See above

Field Office:

Grand Junction Office
P. O. Box 2569
Grand Junction, CO 81501

Ben Bowyer
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Laboratories:

D16 Bendix Field Engineering Corporation
P. O. Box 1569
Grand Junction, CO 81501

R. B. Chessmore
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FTS: 322-9515

Field Office:

Idaho Operations Office
550 Second Street
Idaho Falls, ID 83401

J. H. Barry
(208) 526-0196
FTS: 583-0193

Laboratory:

D17 EG&G Idaho, Inc.
Idaho National Engineering Laboratory
P. O. Box 1625
Idaho Falls, Idaho 83401

M. J. Sexey
(208) 526-1431
FTS: 583-1684

Field Office:

D18 Laramie Energy Technology Center
P. O. Box 3395
University Station
Laramie, WY 82071

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Field Office:

D19 Morgantown Energy Technology Center
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Morgantown, WV 26505

John D. Pearson
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FTS: 923-7172

Laboratory:

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Nevada Operations Office
P. O. Box 14100
Las Vegas, NV 89114

Shed R. Elliott
(702) 734-3237
FTS: 598-3237

Laboratories:

D20 EG&G Energy Measurements Group
680 East Sunset Road
Las Vegas, NV 89119

W. C. Roper, Jr.
(702) 647-5301

D21 Holmes & Narver, Inc.
OCTD/NTS
Cable/Connector Test Facility
P. O. Box I
Mercury, NV 89023

Anthony Swanic
(702) 986-0674
FTS: 546-0674

D22 Reynolds Electrical & Engineering Co., Inc.
P. O. Box 14400
Mail Stop 625
Las Vegas, NV 89114

David Fine
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Field Office:

Oak Ridge Operations
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Charles A. Keller

Laboratories:

D23 Goodyear Atomic Corporation
Portsmouth Gaseous Diffusion Plant
P. O. Box 628
Piketon, OH 45661

R. W. Brown
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FTS: 975-2396

D24 National Lead Company of Ohio
Mechanical Department
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Cincinnati, OH 45239

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D25 Oak Ridge Associated Universities
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D27 Union Carbide Corp.,
Nuclear Division
Analytical Services Department
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D28 Union Carbide
Paducah Gaseous Diffusion Plant
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Paducah, KY 42001

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D29 Union Carbide Corp.,
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K-25 Plant, Materiel Quality
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D30 Union Carbide Corporation
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Physical and Electrical Standards Laboratory
Y-12 Plant
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Oak Ridge, TN 37830

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D31 Pittsburgh Energy Technology Center
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Laboratory:

See above.

Field Office:

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Richland, WA 99352

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D32 Pacific Northwest Laboratories
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D. M. Fleming
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D33 Westinghouse Hanford Physical and
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D35 Lawrence Livermore Laboratory
University of California
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D36 Rockwell International
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D37 Stanford Linear Accelerator Center
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R. B. Neal
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D38 E. I. du Pont de Nemours and Co.
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Portland, OR 97208

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D39 Bonneville Power Administration
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DEPARTMENT OF TRANSPORTATION

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E1 Civil Aeromedical Institute
Mike Monroney Aeronautical Center
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6500 South MacArthur
Oklahoma City, OK 73125

Edward Podolak
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E2 Standards and Calibration Laboratory
Federal Aviation Administration
National Aviation Facilities
Experimental Center
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Atlantic City, NJ 08405

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E3 Transportation Test Center
Calibration Lab
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Transportation Test Center
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Electronic Instrument Services Branch
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F2 Hugh L. Dryden Flight Research Center
Aeronautics Research Instruments Lab.
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F3 Goddard Space Flight Center
Quality Support Office
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F4 Jet Propulsion Laboratory
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F5 Lyndon B. Johnson Space Center
Engineering Standards & Calibration Lab.
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F6 John F. Kennedy Space Center
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F7 Langley Research Center
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Langley Station
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F8 Lewis Research Center
Equipment & Instrument Utilization Branch
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Basil P. Kluchnik
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F9 George C. Marshall Space Flight Center
Standard & Calibration Branch
Marshall Space Flight Center, AL 35812

G. T. Carpenter
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F10 National Space Technology Laboratories
NSTL Station, MS 39529

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F11 Wallops Flight Center
Wallops Island, VA 23337

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IV. LABORATORY CAPABILITIES

DEPARTMENT OF DEFENSE

AIR FORCE

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
Newark AFS	CN	X	X	X	X	X	X	X	X		X	X	X					
Type II A Laboratories (see listing on page 3)		X	X	X	X	X	X	X	X	X	X	X	X					
Type II B-1 Laboratories (see listing on page 4)	N	X	X		X	X	X		X		X	X	X		X			
Type II B-2 Laboratories (see listing on page 4)		X	X		X	X	X		X		X	X	X					
Type II C Laboratories (see listing on page 11)	N	X	X	X	X	X	X	X	X		X	X	X					

C - Has a Laboratory Capabilities Catalog
N - Is a member of the National Conference of Standards Laboratories

DEPARTMENT OF DEFENSE (CONTINUED)

ARMY

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
Area Calibration Laboratory, Korea	C	X	X	X	X	X	X	X	X	X	X	X	X					X
Area Calibration Laboratory, Letterkenny Army Depot	C	X	X		X	X	X	X	X	X	X	X	X	X	X			X
Area Calibration Laboratory, Tobyhanna Army Depot	C	X	X		X	X	X	X	X	X	X	X						
Army Standards Laboratory, Redstone Arsenal	CN	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X
CRSC, Augsburg	C	X	X	X	X	X	X	X	X	X	X	X						X
CRSC, Pirmasens	C	X	X	X	X	X	X	X	X	X	X	X	X					X
CRSC, Schwanheim	C	X	X	X	X	X	X	X	X	X	X	X			X			X
Lexington-Blue Grass Depot		X	X	X	X	X	X	X	X	X	X	X	X					

C - Has a Laboratory Capabilities Catalog
N - Is a member of the National Conference of Standards Laboratories

DEPARTMENT OF DEFENSE (CONTINUED)

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
NAVY																		
Navy Standards Laboratories Type I (see listing on page 13)		X	X	X	X	X	X	X	X	X	X	X			X			X
Navy Standards Laboratories Type II (see listing on page 13)		X	X		X	X	X	X	X	X	X	X			X			X
Navy Calibration Laboratories (see listing on page 13)		X	X		X	X	X	X	X		X	X						

C - Has a Laboratory Capabilities Catalog
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DEPARTMENT OF ENERGY

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
Albuquerque Operations Office																		
Bendix Corp., Kansas City Div.	CN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
General Electric Co., Neutron Devices Department	CN	X			X	X	X	X	X	X	X	X	X	X	X	X	X	
Los Alamos Scientific Lab.		X			X	X	X	X	X	X	X	X	X			X	X	X
Monsanto Research Corporation Mound Facility	CN	X			X	X	X	X	X	X	X	X	X		X	X	X	
Mason & Hanger-Silas Mason Co.	CN	X	X		X	X	X			X	X	X			X	X	X	
Rockwell International, Rocky Flats Plant	CN	X			X	X	X		X	X	X	X	X	X		X	X	X
Sandia Laboratories Metrology Laboratory	CN	X			X	X	X			X	X	X			X			
Sandia Laboratories Primary Standards Laboratory	CN	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
Bartlesville Energy Technology Center																		
Bartlesville Laboratory						X			X		X	X	X				X	

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DEPARTMENT OF ENERGY (CONTINUED)

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
Chicago Operations Office																		
Ames Laboratory		X			X			X	X		X		X				X	
Argonne National Laboratory	N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brookhaven National Laboratory																		
Fermi National Accelerator Lab		X	X	X	X	X	X					X	X			X		
New Brunswick Laboratory	C																X	
Grand Forks Energy Technology Center																		
Grand Forks Laboratory		X																
Grand Junction Office																		
Bendix Field Engineering Corp.	C												X				X	X
Idaho Operations Office																		
EG&G Idaho	CN	X			X	X	X		X	X	X	X	X		X	X	X	
Laramie Energy Technology Ctr.																		
Laramie Energy Technology Ctr.									X		X						X	

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DEPARTMENT OF ENERGY (CONTINUED)

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
Morgantown Energy Technology Center																		
Morgantown Energy Tech. Ctr.		X						X	X			X	X		X		X	
Nevada Operations Office																		
EG&G, Las Vegas	CN	X	X		X	X	X	X		X	X	X	X			X		X
Holmes & Narver		X	X	X	X	X	X				X	X			X	X		X
Reynolds	N					X	X	X	X		X	X	X	X		X	X	X
Oak Ridge Operations																		
Goodyear Atomic, Portsmouth																	X	
National Lead Company of Ohio		X				X					X	X						
Oak Ridge Associated Universities													X					
Oak Ridge National Laboratory	CN	X			X	X	X		X	X	X	X			X	X	X	X
Union Carbide, Analytical Services													X				X	

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DEPARTMENT OF ENERGY (CONTINUED)

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
Union Carbide, Paducah Plant			X			X					X	X						
Union Carbide, K-25 Plant					X	X		X	X			X				X		
Union Carbide, Y-12 Plant	CN	X		X	X	X	X	X	X	X	X	X	X		X	X	X	X
Pittsburgh Energy Technology Center																		
Pittsburgh Energy Technology Center																X	X	
Richland Operations Office																		
Pacific Northwest Labs	C												X					
Westinghouse Hanford Lab	CN	X			X	X	X		X	X	X	X			X			X
San Francisco Operations Office																		
Lawrence Berkeley Laboratory		X		X	X		X				X	X	X				X	X
Lawrence Livermore Lab.	N	X	X	X	X	X	X	X			X	X	X		X	X	X	X
Rockwell International		X			X	X	X		X		X	X	X				X	
Stanford Linear Accelerator Center		X	X	X	X	X	X	X	X	X	X	X	X	X			X	X

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DEPARTMENT OF ENERGY (CONTINUED)

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
Savanah River Operations Center																		
E. I. du Pont de Nemours & Co. Savanah River Laboratory	CN	X			X	X	X			X	X	X	X		X		X	
Bonneville Power Admin.																		
Bonneville Laboratory	CN	X								X	X							X

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DEPARTMENT OF TRANSPORTATION

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
Civil Aeromedical Institute Oklahoma City, Oklahoma			X		X	X		X			X	X	X			X	X	
Standards and Calibration Laboratory - Atlantic City, New Jersey	C	X	X		X	X	X	X		X	X	X			X	X		X
Transportation Test Center Calibration Laboratory - Pueblo, Colorado	CN	X			X	X	X	X			X	X				X	X	

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NASA

	C, N	Electrical-DC/LF	Electrical-RF/Microwave	Magnetics, Dielectrics	Time and Frequency	Mass, Force, Density	Dimensional, Optics, Surface	Acoustics, Sound, Noise, Vibration	Liquid Gas Flow	Humidity	Temperature	Pressure, Vacuum	Ionization Radiation, Radioactivity	Medical Instrumentation	Automated Measuring Equipment	Material & Products Testing	Chemical Analysis	Radiometry and Photometry
Ames Research Center																		
Dryden Flight Research Center																		
Goddard Space Flight Center	C	X	X		X	X	X				X	X						
Jet Propulsion Laboratory	C	X	X	X	X	X	X	X			X	X						
Johnson Space Center	CN	X	X		X	X	X	X	X	X	X	X			X		X	X
Kennedy Space Center	CN	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
Langley Research Center	C	X	X		X	X	X	X	X	X	X	X	X		X			X
Lewis Research Center	C	X	X		X	X		X	X		X	X			X			
Marshall Space Flight Center	CN	X	X		X	X	X	X	X	X	X	X						
National Space Technology Laboratories	C	X	X		X	X	X	X	X	X	X	X				X	X	X
Wallops Flight Center	C	X	X	X	X	X					X	X					X	

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N - Is a member of the National Conference of Standards Laboratories

V. GEOGRAPHICAL LISTING

This section is designed to assist in the location of a laboratory in a given geographical area. First there is a listing of laboratories by states. Each laboratory, listed by name only, is assigned a code. This code can be used to obtain further information about the laboratory by consulting the listings in Section III. The appropriate pages are given as follows:

CODE	PAGE
A	3
B	12
C	13
D	18
E	23
F	24

A map showing the location of each of the laboratories is given in Figure 1. The codes shown are those described above.

LABORATORY LISTING BY STATE

Code	Name	Zip Code
	ALABAMA	
B1	US Army Metrology & Calibration Center	35809
F9	George C. Marshall Space Flight Center	35812
A64	Maxwell Air Force Base	36112
	ALASKA	
A37	Eielson Air Force Base	99702
A4	Elmendorf Air Force Base	99506
C35	Naval Station, ADAK, AK (FPO SE)	98791
A91	Shemya AFB, AK (APO SE)	98736
	ARIZONA	
A33	Davis Monthan Air Force Base	85707
A61	Luke Air Force Base	85309
A101	Williams Air Force Base	85224
	ARKANSAS	
A25	Blytheville Air Force Base	72315
A58	Little Rock Air Force Base	72076
	CALIFORNIA	
F1	Ames Research Center	94035
A23	Beale Air Force Base	95903
A29	Castle Air Force Base	95342
A104	Edwards Air Force Base	93523
A42	George Air Force Base	92392
F2	Hugh L. Dryden Flight Research Center	93523
F4	Jet Proplusion Laboratory	91103
D34	Lawrence Berkeley Laboratory	94720
D35	Lawrence Livermore Laboratory	94550
C10	Long Beach Naval Shipyard	90802
C11	Mare Island Naval Shipyard	94592
A63	Mather Air Force Base	95655
A7	McClellan Air Force Base	95652
C16	MCLSB Pacific	92311
C3	Naval Air Rework Facility, Alameda	94501
C21	Naval Air Rework Facility, North Island	92135
C6	Naval Plant Representative Office, Pomona	91766
C38	Naval Weapons Center, China Lake	93555
C39	Naval Weapons Station, Concord	94520
C42	Naval Weapons Station, Seal Beach	90740
A74	Norton Air Force Base	92409
C46	Pacific Missle Test Center	93042
D36	Rockwell International	91304
D7	Sandia Laboratories	94550
D37	Stanford Linear Accelerator Center	94305
A96	Travis Air Force Base	94535
A112	Vandenberg Air Force Base	93437
C1	Western Standards Laboratory	92135

Code	Name	Zip Code
	COLORADO	
D16	Bendix Field Engineering Corporation	81501
A60	Lowry Air Force Base	80230
A79	Peterson Air Force Base	80914
D6	Rockwell International	80401
E3	Transportation Test Center Calibration Lab	81001
A99	USAFA Co.	80840
	DELAWARE	
A34	Dover Air Force Base	19901
	DISTRICT OF COLUMBIA	
C2	Eastern Standards Laboratory	20374
	FLORIDA	
A105	Eglin Air Force Base	32542
D2	General Electric Company	33733
A47	Homestead Air Force Base	33030
F6	John F. Kennedy Space Center	32899
A62	MacDill Air Force Base	33608
C5	Naval Air Rework Facility, Pensacola	32508
C20	Naval Air Rework Facility, Jacksonville	32212
A110	Patrick Air Force Base ATTN: J. George	32925
A111	Patrick Air Force Base ATTN: R. Schnepf	32925
A97	Tyndall Air Force Base	32403
	GEORGIA	
C15	MCLSB Atlantic	31704
A69	Moody Air Force Base	31601
A9	Robins Air Force Base	31098
	HAWAII	
A46	Hickam Air Force Base	96853
C8	Pearl Harbor Naval Shipyard	96860
C14	US Marine Corps Air Station	96863
	IDAHO	
D17	EG&G Idaho, Inc.	83401
A70	Mt. Home Air Force Base	83648
	ILLINOIS	
D11	Argonne National Laboratory	60439
A11	Chanute Air Force Base	61868
D13	Fermi National Accelerator Laboratory	60510
D14	New Brunswick Laboratory	60439
A87	Scott Air Force Base	62225

Code	Name	Zip Code
	INDIANA	
A44	Grissom Air Force Base	46971
C27	Naval Avionics Facility	46218
C41	Naval Weapons Support Center, Crane	47522
	IOWA	
D10	Ames Laboratory	50011
	KANSAS	
A41	Forbes Air Force Base	66620
A66	McConnell Air Force Base	67221
	KENTUCKY	
B8	Lexington-Blue Grass Depot Activity	40511
C31	Naval Ordnance Station	40214
D28	Union Carbide	42001
	LOUISIANA	
A22	Barksdale Air Force Base	71110
A38	England Air Force Base	71301
	MAINE	
A59	Loring Air Force Base	04750
	MARYLAND	
A20	Andrews Air Force Base	20331
F3	Goddard Space Flight Center	20771
C26	Naval Air Test Center, Patuxent River	20670
C30	Naval Ordnance Station, Indian Head	20640
C37	White Oak Laboratory	20910
	MASSACHUSETTS	
A107	Hanscom Air Force Base	01731
A77	Otis Air Force Base	02542
	MICHIGAN	
A49	K. I. Sawyer Air Force Base	49842
A88	Selfridge ANGB	48045
A102	Wurtsmith Air Force Base	48753
	MINNESOTA	
A35	Duluth International Airport	55814
	MISSISSIPPI	
A32	Columbus Air Force Base	39701
A52	Kessler Air Force Base	39534
F10	National Space Technology Laboratories	39529

Code	Name	Zip Code
	MISSOURI	
D1	The Bendix Corporation	64141
A16	Whiteman Air Force Base	65305
	MONTANA	
A14	Malmstrom Air Force Base	59402
	NEBRASKA	
A75	Offutt Air Force Base	68113
	NEVADA	
D20	EG&G Energy Measurements Group	89119
D21	Holmes & Narver, Inc.	89023
A73	Nellis Air Force Base	89191
D22	Reynolds Electrical & Engineering Co., Inc.	89114
	NEW HAMPSHIRE	
A78	Pease Air Force Base	03801
C48	Portsmouth Naval Shipyard	03801
	NEW JERSEY	
A67	McGuire Air Force Base	08641
C17	Naval Air Engineering Center, Lakehurst	08733
C40	Naval Weapons Station, Earle	07722
E2	Standards & Calibration Laboratory	08405
	NEW MEXICO	
A27	Cannon Air Force Base	88101
A108	Holloman Air Force Base	88330
A109	Kirtland Air Force Base	87117
D3	Los Alamos Scientific Laboratory	87545
D8	Sandia Laboratories	87185
	NEW YORK	
D12	Brookhaven National Laboratory	11973
A106	Griffis Air Force Base	13441
A80	Plattsburgh Air Force Base	12903
	NORTH CAROLINA	
C19	Naval Air Rework Facility, Cherry Point	28533
A81	Pope Air Force Base	28308
A89	Seymour Johnson Air Force Base	27531
	NORTH DAKOTA	
A43	Grand Forks Air Force Base	58201
D15	Grand Forks Energy Technology Center	58205
A15	Minot Air Force Base	58705

Code	Name	Zip Code
	TEXAS	
A24	Bergstrom Air Force Base	78743
A28	Carswell Air Force Base	76127
A35	Dyess Air Force Base	79607
A6	Kelly Air Force Base	78241
A57	Laughlin Air Force Base	78840
F5	Lyndon B. Johnson Space Center	77058
D4	Mason and Hanger-Silas Mason Company	79117
A83	Randolph Air Force Base	78148
A84	Reese Air Force Base	79489
A92	Sheppard Air Force Base	76311
	UTAH	
A5	Hill Air Force Base	84406
	VIRGINIA	
A56	Langley Air Force Base	23665
F7	Langley Research Center	23665
C4	Naval Air Rework Facility, Norfolk	23511
C29	NAVELEXSYSENGCEN Portsmouth	23705
C43	Naval Weapons Station, Yorktown	23491
C45	Norfolk Naval Shipyard	23709
F11	Wallops Flight Center	23337
	WASHINGTON	
D39	Bonneville Power Administration	98660
A39	Fairchild Air Force Base	99011
A65	McChord Air Force Base	98438
C25	Naval Air Station, Whidbey Island	98278
C44	Navy Torpedo Station	98345
D32	Pacific Northwest Laboratories	99352
C49	Puget Sound Naval Shipyard	98314
D33	Westinghouse	99352
	WEST VIRGINIA	
D19	Morgantown Energy Technology Center	26505
	WYOMING	
A13	F. E. Warren Air Force Base	82001
D18	Laramie Energy Technology Center	82701

Code	Name	Zip Code
	OHIO	
A1	Air Force Measurement Standards Laboratories	43055
D23	Goodyear Atomic Corporation	45661
F8	Lewis Research Center	44135
D5	Monsanto Research Corporation	45342
D24	National Lead Company of Ohio	45239
A8	Newark Air Force Base	43055
A85	Rickenbacker Air Force Base	43217
A113	Wright-Patterson Air Force Base	45433
	OKLAHOMA	
A18	Altus Air Force Base	73521
D9	Bartlesville Energy Technology Center	74003
E1	Civil Aeromedical Institute	73125
A10	Tinker Air Force Base	73145
A100	Vance Air Force Base	73701
	PENNSYLVANIA	
B4	Area Calibration Laboratory, Tobyhanna	18466
B3	Army Area Calibration Laboratory, Letterkenney	17201
C47	Philadelphia Naval Shipyard	19112
D31	Pittsburgh Energy Technology Center	15213
	RHODE ISLAND	
C7	US Navy Underwater Systems Center	02840
	SOUTH CAROLINA	
A30	Charleston Air Force Base	29404
C9	Charleston Naval Shipyard	29408
D38	E. I. Du Pont De Nemours and Company	29801
A72	Myrtle Beach Air Force Base	29577
C28	NAVELEXSYSENGCEN Charleston	25406
A90	Shaw Air Force Base	29152
	SOUTH DAKOTA	
A12	Ellsworth Air Force Base	57706
	TENNESSEE	
D25	Oak Ridge Associated Universities	37830
D26	Oak Ridge National Laboratory	37830
D27	Union Carbide Corporation, Nuclear Division ATTN: O. H. Howard	37830
D29	Union Carbide Corporation, Nuclear Division ATTN: E. Y. Kimmerly	37830
D30	Union Carbide Corporation, Nuclear Division ATTN: S. W. Lockett	37830

LABORATORIES OUTSIDE THE UNITED STATES

Code	Name	Zip Code
	ATLANTIC	
A55	Lajes Field Azores	APO NY 09406
C23	US Naval Air Station, Bermuda	FPO NY 09560
A17	Albrook AFS CZ	APO NY 09825
A94	Thule AB Greenland	APO NY 09023
A53	Keflavik APRT Iceland	APO NY 09571
A71	Muniz ANGB PR	PR 00914
	ASIA	
A19	Andersen AFB Guam	APO SF 96334
C22	US Naval Air Station Agana, Guam	FPO SF 96637
C32	Naval Ship Repair Facility, Guam	FPO SF 96630
C13	Marine Corps Air Station, Iwakuni, Japan	FPO SE 98764
A68	Misawa AB Japan	APO SF 96519
C34	US Naval Ship Repair Facility, Yokosuka, Japan	FPO SE 98762
A103	Yokota AB Japan	APO SF 96328
B2	Area Calibration Laboratory, Korea	APO SF 96460
A54	Kunsan AB Korea	APO SF 96264
A76	Osan AB Korea	APO SF 96570
A50	Kadena AB Okinawa	APO NY 96239
C12	Marine Corps Air Station (H), Futema, Okinawa	FPO SE 98772
A3	Clark AB Phil	APO SF 96274
C24	Naval Air Station, Cubi Pt. Phil	FPO SF 96654
C33	Naval Ship Repair Facility, Subic Bay, Phil	FPO SF 96651
A31	Ching Chuan Kang Taiwan	APO SF 96319
	EUROPE	
A40	Feltwell England	APO NY 09179
A98	Upper Heyford England	APO NY 09194
A2	Bitburg AB GE	APO NY 09132
B5	CRSC, Augsburg	APO NY 01978
B6	CRSC, Pirmasens	APO NY 09138
B7	CRSC, Schwanheim	APO NY 09057
A45	Hahn AB GE	APO NY 09109
A82	Ramstein AB Germany	APO NY 09012
A93	Tempelhof Cent APRT Ger	APO NY 09611
A21	Aviano AB Italy	APO NY 09293
C18	US Naval Air Facility, Sigonella, IT	FPO NY 09523
A86	San Vito Dei Normanni, IT	APO NY 09240
A26	Camp New Amsterdam AB NE	APO NY 09292
C36	US Naval Station, Rota, Spain	FPO NY 09540
A95	Torrejon AB Spain	APO NY 09283
A48	Incirlik CDI Turkey	APO NY 09289
A51	Karamursel CDI Turkey	APO NY 09324

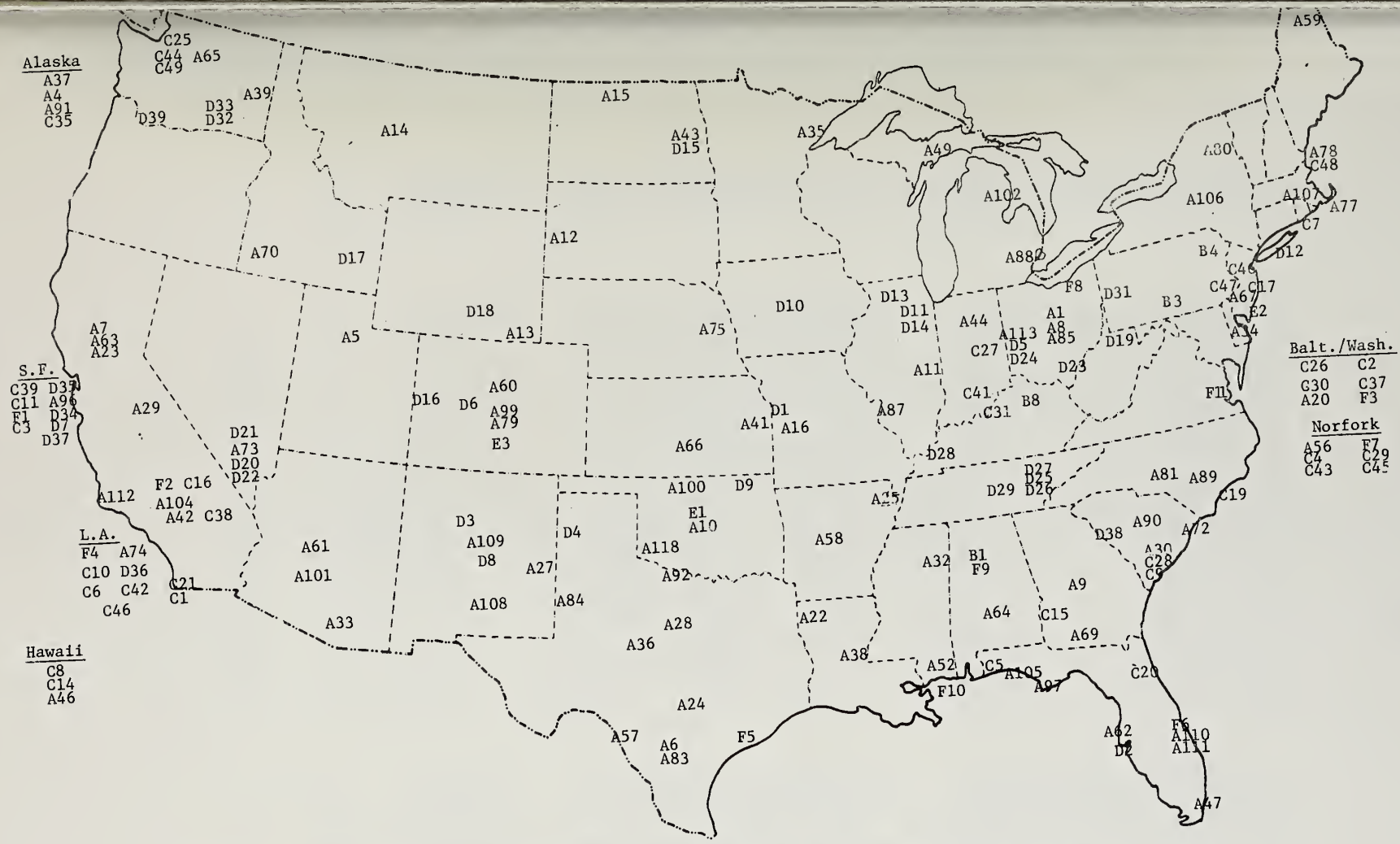

Figure 1: Laboratory locations. For complete information see the listings beginning on the following pages:

CODE	PAGE	CODE	PAGE
A	3	D	18
B	12	E	23
C	13	F	24

VI. CATEGORY DESCRIPTIONS

In order that the user of this catalog may better interpret the laboratory capabilities as indicated by the categories listed in Section IV, the following examples are given. They are intended only to indicate the type of measurement to be included in each category and are not to be considered an all-inclusive listing.

1. ELECTRICAL - DC/LF

DC Voltage	AC Voltage (low freq.)
DC Voltage ratio	AC Current (low freq.)
DC Current	Capacitance
Resistance	Inductance

2. ELECTRICAL - RF/MICROWAVE

AC Voltage	Capacitance
AC Voltage ratio	Inductance
AC Current	Reflection coefficient
Phase Angle	RF power
Attenuation	Laser power

3. MAGNETICS, DIELECTRICS
   - Magnetic field
   - Magnetic material properties
   - Dielectric material properties

4. TIME & FREQUENCY
   - Time
   - Frequency

5. MASS, FORCE, DENSITY

Mass	Acceleration
Density	Shock
Force	Vibration
Torque	

6. DIMENSIONAL, OPTICS, SURFACES

Length	Refractive index
Inside diameter	Optical lens evaluation
Roundness, concentricity	Optical alignment
Angle	Flatness
Volume	Surface roughness
Thread	Hardness

7. ACOUSTICS, SOUND, NOISE VIBRATION
   - Acoustics
   - Sound pressure level
   - Microphone sensitivity

8. LIQUID & GAS FLOW

Liquid flow	Hydraulics
Gas flow	Air speed

9. HUMIDITY
   - Relative humidity
   - Absolute himidity

10. TEMPERATURE
    - Temperature

11. PRESSURE, VACUUM
    - Pressure
    - Vacuum
    - Altimetry

12. IONIZING RADIATION, RADIOACTIVITY
    - Alpha, Beta, and Gamma measurements
    - Neutron measurements
    - X-ray exposure

13. MEDICAL INSTRUMENTATION
    - EKG portable recorders
    - EKG strip chart recorders
    - Defibrillators

14. AUTOMATED MEASURING EQUIPMENT
    - Commercial automated calibration systems

15. MATERIALS & PRODUCTS TESTING
    - Concrete
    - Building materials
    - Paper
    - Rubber
    - Structures

16. CHEMICAL ANALYSIS
    - Spectrophotometry
    - Gas chromatography
    - Spectrophotofluorometry
    - pH test
    - Water pollution
    - Air pollution

17. RADIOMETRY AND PHOTOMETRY
    - Luminous intensity
    - Total irradiance
    - Color temperature
    - Brightness temperature
    - Solar radiometry
    - Optical density

VII. OTHER INFORMATION SOURCES

1. National Conference of Standards Laboratories

The National Conference of Standards Laboratories (NCSL) is a continuing, nonprofit, laboratory-oriented organization which promotes cooperative efforts toward solving the common problems faced by standards laboratories in their organization and operation. It was established in 1961 under the sponsorship of the National Bureau of Standards. Its membership consists of academic, scientific, industrial, commercial, and government laboratories concerned with measuring physical quantities, calibrating standards and instruments, and developing standards of practice. It provides liaison with technical societies, trade associations, and educational institutions interested in these activities.

NCSL pursues its goals through joint voluntary action. It holds conferences and workshops, collects and disseminates information about current practices, prepares source material for preferred technical procedures, determines pertinent statistical information related to measurement standards and calibration activities, and helps laboratories to arrange measurement agreement audits.

NCSL prepares and distributes "A Directory of Standards Laboratories" which lists member and other standards laboratories. Each laboratory listing includes the laboratory address, name and telephone number of a point of contact, and an indication of the capabilities of the laboratory. Although the majority listed are private laboratories, also included are some Federal and State government laboratories.

The NCSL directory and membership lists may be obtained from:

NCSL Secretariat
c/o National Bureau of Standards
Attention: L. Kenneth Armstrong
Boulder, CO 80303
(303) 499-1000 x3787

NCSL information is also available from the NBS
Office of Measurement Services.

2. Government-Industry Data Exchange Program

The Government-Industry Data Exchange Program (GIDEP) is a cooperative effort to save time and money by making maximum use of existing knowledge. The program allows exchange of technical data essential in the research, design, development, production, and operational phases of the life cycle of systems and equipment.

The program is centrally managed and funded by the Government. Its participating organizations are the United States Army, Navy, Air Force, Marine Corps, Defense Supply Agency, General Services Administration, National Aeronautics and Space Administration, Department of Energy, and the National Security Agency, as well as the Canadian Department of Defence and hundreds of industrial organizations.

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Calibration; Federal Government; laboratory; measurement; metrology; precision; test equipment.

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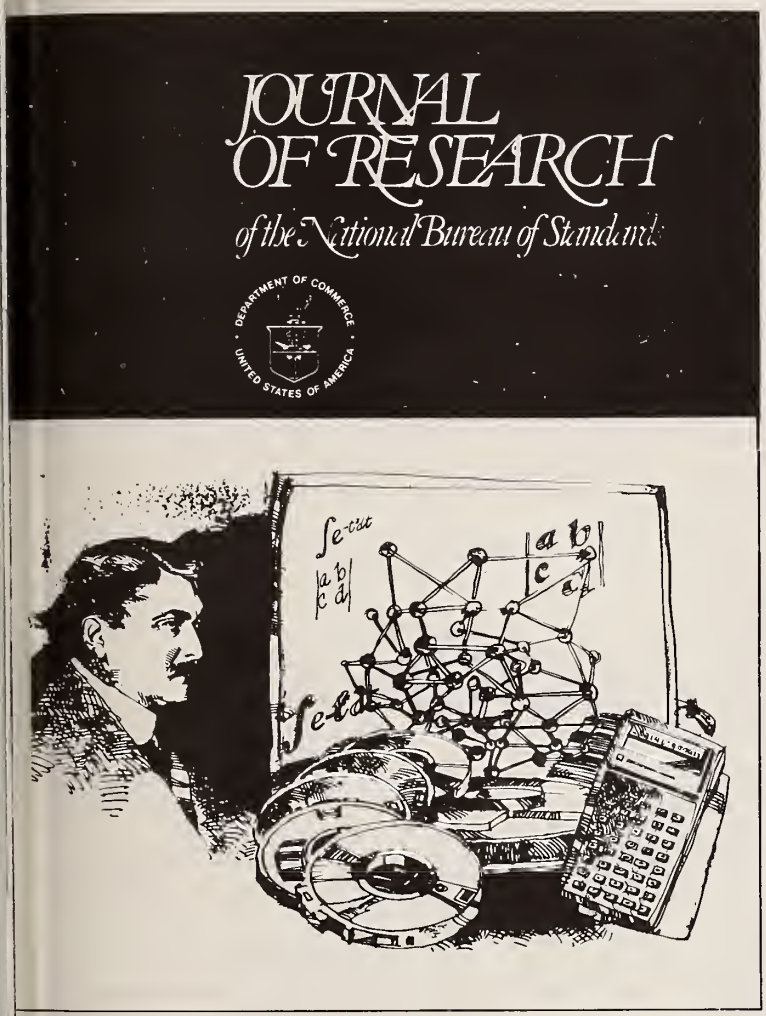

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